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EXAMINER

HOEL, MATTHEW D

ART UNIT	PAPER NUMBER
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3714

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/657,650

Applicant(s)

PACEY ET AL.

Examiner

Matthew D. Hoel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed Sept. 11th, 2006 have been fully considered but they are not persuasive. The examiner's "Response to Arguments" from the last office action is incorporated herein by reference, as the applicant's arguments have not changed substantially since the last office action. On Page 2 of the last office action the examiner was demonstrating how, while Luciano does not explicitly mention simulation rule data and physical object data, they are clearly suggested by the types of manual dexterity games disclosed in the Luciano reference. Luciano mentions a simulated driving game in which a player must avoid obstacles (Col. 5). The examiner stated that such a game would employ collision detection, which is widely known in the art of video games. The examiner further stated that this collision detection would suggest simulation rule data, as collision detection simulates the interaction of two objects. The examiner asks the applicants how the driving game of Luciano would detect whether or not the vehicle has hit an obstacle without using some form of collision detection? At the very least, the driving game would have to compare the coordinates of the vehicle to the coordinates of the obstacle on the screen—more elaborate versions of collision detection would detect if the vehicle can within a certain distance of the obstacle or would use the dimensions and orientation of the vehicle in relation to its center of gravity along with the dimensions and orientation of the object in relation to its center of gravity to calculate when and if any point on the vehicle came into any point on the obstacle.

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The applicants stated that the examiner was going beyond what was implicitly disclosed by Luciano; the examiner submits that he was not. Collision detection, a form of simulation rule data, is certainly suggested by Luciano. Physical object data are also suggested by Luciano. Col. 6, Lines 17 to 21 talk about a simulated golf ball landing at a location, which would at the very least involve locations of distance and location, both of which are measurable physical quantities associated with an object, as is the inherent speed of the vehicle in the vehicle simulation game. Any measurable physical quantity associated with an object can be fairly construed as physical object data—mass is not claimed as physical object data in the independent claims, only later in the dependent claims. In any event, the physical object data and simulation rule data were properly supplied by the 103 combination with Oshima, which is a sports dexterity game (game of skill involving player's timing in releasing the hammer, Oshima, Col. 2, Lines 23 to 36). Oshima implicitly addresses mass in that throwing energy, i.e. kinetic energy ($E_k = \frac{1}{2}mv^2$, involving mass) in the bar graphs of Figs. 5A-D and Col. 15, Lines 5 to 16. The examiner will not address the previous rejection of the Claim 23 in light of the roulette game of Fentz except to say that it was a legitimate rejection as physical object data (location, angle, distance, speed) and simulation rule data (formulas for calculating ball bounce pattern) were clearly outlined in Cols. 13 and 14. The Fentz rejection was withdrawn in light of the newly cited limitations. The applicants appear to be rebutting the Fentz application because the calculations did not cite mass as physical object data. The limitations of the specification, nor the applicants' preferred embodiment, were read into the claim language. The applicants appear to be rebutting the Oshima reference on

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the same ground. Oshima clearly teaches physical object data as outlined in the rejections and in the examiner's last "Response to Arguments." Regarding the separate classifications of Luciano, Oshima, and French as evidence of non-obviousness, the examiner already addressed this issue in the examiner's last "Response to Arguments," which is incorporated by reference to avoid repetition. To elaborate, however, the examiner notes that the applicants have cited no court cases or MPEP sections in support of this rebuttal. The references were analogous art, solving similar problems, and as such were fairly combined. French is intended to be used to acquire physical object data to be used in simulations of sports—Luciano and Oshima are both video games that simulate sports, so physical object data taken from players actually playing a game would be an obvious choice for creating models for the video game embodiments of Luciano and Oshima. French discloses a sports simulation involving skiing (Fig. 27, Col. 38), which is certainly a sports simulation and a game of dexterity. It would also lend itself to physical object data and simulation rule data as it involves objects and avoiding collision with obstacles (Col. 38, Lines 33 to 39). The applicants seem to have understood French and like references as being relevant to the claim language, as an extremely similar reference, WO 01/35208 A1 or PCT/KR00/01158, was listed on the IDS. The examiner respectfully disagrees with the applicants' as to the claims' condition for allowability.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 2, 5, 7, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luciano, et al. (U.S. patent 6,050,895 A) in view of Oshima (U.S. patent 6,045,446 A) and Lipson (U.S. patent 5,435,554 A).

4. As to Claim 1: Luciano in '895 discloses all of the elements of Claim 1, but lacks specificity as to processing physical object data and simulation rule data, and realistically depicting gaming activity on a display. Luciano in '895 teaches a gaming machine (Fig. 1A) with means for accepting a wager (coin acceptor 106, bill validator 108, and card reader 112, Fig. 1A). '895 has a display (104, Fig. 1A). '895 has a means for cashing out the payoff based on an outcome of the gaming activity (3, Fig. 3; Col. 10, Line 67 to Col. 11, Line 1). The game of '895 has a central controller 512 (Fig. 5; Col. 11, Lines 42 to 46). Oshima, however, in '446 teaches physical object data, simulation rule data, and producing a realistic depiction of gaming activity on a display. '446 has physical object data (coordinates, Figs. 3A-C and 4A-H). '446 also has simulation rule data (calculating means, result information setting means, decision means, graphic command issuing means, variable setting means, linear and angular displacement acquiring means, and polygon information managing means, Fig. 2). '446 has a realistic depiction of gaming activity on the display (hammer-throwing field athlete, Figs. 5A-D). It would be obvious to one of ordinary skill in the art to apply the realistic depiction, physical object data, and simulation rule data of '446 to '895. The hammer-throwing game of '446 is a game of skill. '446 controls the throwing body (athlete) in

response to commands from manual operation of the controller and controls the object to be hurled (hammer) in response to commands from manual operation of the controller (Col. 3, Lines 17 to 22). The game of '895 is a hybrid game, at least one part of which involves hand-eye coordination and dexterity (Col. 2, Lines 5 to 15), like the hammer-throwing game of '446. The joystick (118, Fig. 1A) of '895 would be appropriate for controlling the game of '446. The coordination/dexterity portion of '895 can be a sports game (Col. 5, Lines 28 to 31). The advantage of this combination would be to provide a sports-oriented coordination game with a familiar theme such as hammer throwing to stimulate players' interest in playing the gaming machine. '554, however, teaches simulation rule data including performance tendencies of a physical object, namely performance tendencies of a batter and a pitcher based on past performance. Step 418 of Fig. 7 calculates an altitude error of a hit ball in a baseball game based on the player's skill (Col. 16, Lines 7 to 21). Step 332 of Fig. 6c calculates hit/miss values based in part on the quality of the pitch and the skill of the batter (Col. 15, Lines 47 to 58). It would be obvious to one of ordinary skill in the art to apply the performance tendencies of '554 to the combination of '895 and '446. The skill game of '895 can be a sports game requiring some sort of aiming decision (Col. 5, Lines 28 to 31), exactly like the baseball game of '554, which require skill in pitching or batting. '446 also lends itself to this combination as the main embodiment described is a hammer-throwing game, which is analogous to the pitching of the baseball game of '554. The hammer-throwing game is a game of skill; the throwing is based on the timing of the player (Col. 2, Lines 23 to 35). An altitude error for the thrown hammer similar to

that of the batted ball of '554 ('554, Step 418, Fig. 7) could be applied. The advantage of this combination would be to make the game more realistic by introducing a range of error based on the player's past performance. This would reflect the player's skill or lack thereof, providing a means for the player to monitor his or her progress and an incentive to practice.

5. As to Claim 2: '446 has a 3-D processor (10, Fig. 1) interacting with the central processor (1, Fig. 1) to facilitate the production of real-world gaming activity on the display (Figs. 5A-D).

6. As to Claim 7: The gaming activity of '446 is a sport (track and field), and the physical object data refers to a participant in a hammer-throwing event (Figs. 5A-D).

7. As to Claim 15: Luciano in '895 teaches a gaming machine (Fig. 1A) with means for accepting a wager (coin acceptor 106, bill validator 108, and card reader 112, Fig. 1A). '446 simultaneously simulates and displays in real time an interaction of simulated physical objects using representations of three-dimensional forms (Figs. 5A-D). '895 teaches evaluating if an outcome meets winning conditions and awarding a payoff if the outcome meets the winning conditions (334, 336, 337, and 338, Fig. 3). '554 teaches simulation rule data including performance tendencies of a physical object, namely performance tendencies of a batter and a pitcher based on past performance. Step 418 of Fig. 7 calculates an altitude error of a hit ball in a baseball game based on the player's skill (Col. 16, Lines 7 to 21). Step 332 of Fig. 6c calculates hit/miss values based in part on the quality of the pitch and the skill of the batter (Col. 15, Lines 47 to 58). The interaction of the physical objects in '554 includes the performance tendencies

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as the altitude error of the batted ball is determined in part from the batters ability (Step 418, Fig. 7).

8. Claims 3 to 6, 8 to 14, and 16 to 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luciano ('895), Oshima ('446), and Lipson ('554) in view of French, et al. (U.S. patent 6,308,565 B1).

9. As to Claim 3: The combination of Luciano ('895), Oshima ('446), and Lipson ('554) discloses all of the elements of Claim 3, but lacks specificity as to the physical object data including mass and dimensions of at least one simulated object. French, however, in '565 teaches physical object data including mass and dimensions. The physical object data of '565 include mass (Col. 16, Line 62 to Col. 17, Line 8). The player wears beacons or reflectors on his or her body that allow the system to capture movement information (Col. 36, Lines 18 to 50), and the system reports the player's displacement, velocity, and acceleration in absolute terms (Col. 12, Lines 4 to 17), so the data inherently contain the player's physical dimensions. It would be obvious to one of ordinary skill in the art to apply the physical object data of '565 to the combination of '895, '446, and '554. The object data of '565 can be applied to track and field events (Col. 1, Lines 35 to 40; Col. 9, Lines 22 to 24), like the hammer-throwing event of '446. '565 realistically depicts the game event on a display (Col. 8, Lines 23 to 34 and 43 to 52), like '446 (Figs. 5A-D). The advantage of this combination would be to make the depiction of the athletes as realistic as possible by using physical data acquired from actual athletes' performances.

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10. As to Claim 4: '565 is capable of providing a virtual reality experience simulating forces encountered by the athlete in real playing conditions (Col. 36, Lines 52 to 58).

These forces can include resistance from treading through snow, mud, or waist-deep water encountered in outdoor environments (Col. 37, Lines 45 to 49). This information can be used for simulated gaming rule data that interact with the physical object data of the player.

11. As to Claim 5: The gaming machine of '446 depicts a three-dimensional simulation of a hammer-throwing event (Figs. 5A-D).

12. As to Claim 6: The processor of '565 is adapted to mathematically model physical object data and the simulation rule data, and then enable a realistic depiction on the display (Col. 8, Lines 23 to 52).

13. As to Claim 8: Luciano in '895 teaches a gaming machine (Fig. 1A) with means for accepting a wager (coin acceptor 106, bill validator 108, and card reader 112, Fig. 1A). Oshima in '446 teaches accessing physical object data, simulation rule data, and producing a realistic depiction of gaming activity on a display. '446 has physical object data (coordinates, Figs. 3A-C and 4A-H). '446 also has simulation rule data (calculating means, result information setting means, decision means, graphic command issuing means, variable setting means, linear and angular displacement acquiring means, and polygon information managing means, Fig. 2). French in '565 teaches mathematically modeling physical object data and the simulation rule data, and then realistically depicting game actions on a display (Col. 8, Lines 23 to 52). '895 teaches evaluating if game actions meet winning conditions and awarding a payoff if game actions meet the

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winning conditions (334, 336, 337, and 338, Fig. 3). '554 teaches simulation rule data including performance tendencies of a physical object, namely performance tendencies of a batter and a pitcher based on past performance. Step 418 of Fig. 7 calculates an altitude error of a hit ball in a baseball game based on the player's skill (Col. 16, Lines 7 to 21). Step 332 of Fig. 6c calculates hit/miss values based in part on the quality of the pitch and the skill of the batter (Col. 15, Lines 47 to 58).

14.

15. As to Claim 9: '565 accesses motion capture data and uses the data while displaying the visual depiction (Col. 8, Lines 23 to 52).

16. As to Claim 10: '565 mathematically models games actions, namely sports actions (Col. 1, Lines 35 to 43).

17. As to Claim 11: '565 applies simulation rule data to physical object data to result in a mathematical model of real-world physical object interactions (Col. 36, Lines 52 to 58; Col. 37, Lines 45 to 48; Col. 8, Lines 23 to 52).

18. As to Claim 12: '565 defines physical object data by mass (Col. 16, Line 62 to Col. 17, Line 8; Col. 12, Lines 4 to 17; Col. 36, Lines 18 to 47).

19. As to Claim 13: '565 mathematically represents real-world forces (Col. 36, Lines 52 to 58; Col. 37, Lines 45 to 49).

20. As to Claim 14: In '565 the system 560 of Fig. 27 can display moguls, tree branches, other skiers, etc. to realistically simulate a ski slope. The apparent speed of movement is varied as the subject moves to avoid obstacles (Col. 38, Lines 33 to 39).

21. As to Claim 16: '565 simultaneously simulates and displays an interaction of physical objects using simulation rule data to determine an interaction of simulated physical objects using physical object data (Col. 8, Lines 23 to 52; Col. 36, Lines 52 to 58; Col. 37, Lines 45 to 48).

22. As to Claim 17: '895 teaches comparing the game outcome to a set of predefined outcomes and awarding a payoff if the game outcomes meet the winning criteria (334, 336, 337, and 338, Fig. 3).

23. As to Claim 18: '565 simultaneously simulates and displays physical interactions (Col. 8, Lines 23 to 52). '565 teaches a physics engine in the form of software (Col. 8, Lines 23 to 52; Col. 12, Lines 4 to 17; Col. 36, Lines 52 to 58).

24. As to Claim 19: '895 teaches a game of chance that can be roulette (Col. 10, Lines 42 to 46).

25. As to Claim 20: '446 simultaneously simulates and displays a sports game (Figs. 5A-D).

26. As to Claim 21: '565 can be used to model physical interactions in basketball (Col. 26, Lines 50 to 51).

27. As to Claim 22: Luciano in '895 teaches a gaming machine (Fig. 1A) with means for accepting a wager (coin acceptor 106, bill validator 108, and card reader 112, Fig. 1A). '565 teaches a physics engine in the form of software (Col. 8, Lines 23 to 52; Col. 12, Lines 4 to 17; Col. 36, Lines 52 to 58); the physics engine of '565 uses physical object data and simulation rule data to numerically simulate an interaction of physical objects. '446 renders a visual display of a simulated interaction using two-dimensional

representation of three-dimensional forms (Figs. 5A-D). '895 teaches evaluating if an outcome of an interaction meets winning criteria and awarding a payoff if the outcome meets the winning criteria (334, 336, 337, and 338, Fig. 3). '554 teaches simulation rule data including performance tendencies of a physical object, namely performance tendencies of a batter and a pitcher based on past performance. Step 418 of Fig. 7 calculates an altitude error of a hit ball in a baseball game based on the player's skill (Col. 16, Lines 7 to 21). Step 332 of Fig. 6c calculates hit/miss values based in part on the quality of the pitch and the skill of the batter (Col. 15, Lines 47 to 58). The interaction of the physical objects in '554 includes the performance tendencies as the altitude error of the batted ball is determined in part from the batters ability (Step 418, Fig. 7).

28. As to Claim 23: The golf embodiment of '895 has paytables with predetermined payout ratios depending on which section of the golf course the ball lands on (Col. 8, Lines 32 to 39).

29. Claims 1, 8, 15, 22, and 24 to 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luciano, et al. (U.S. patent 6,050,895 A) in view of Bourg ("Physics for Game Developers," by David M. Bourg, © 2002 O'Reilly and Associates, Inc., hereafter referred to as "Physics") and Power Drive Rally ("Power Drive Rally" video game for the Atari Jaguar TM game system, © 1994 Atari Corporation, manual downloaded Oct. 26th, 2006 from www.replacementdocs.com, hereafter referred to as "Power Drive").

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30. As to Claim 1: '895 discloses all of the elements of Claim 1, but lacks specificity as to. '895 teaches a gaming machine (Abst., Fig. 1A). '895 has means for receiving a wager (coin acceptor 106, bill validator 108, and card reader 112, Fig. 1A), system memory (memory 126, Fig. 1A, Col. 11, Lines 34 to 38; controller board or PC inherently has memory, Col. 3, Lines 43 to 47), and a display (Fig. 1A). '895 has a central processor (central controller 512, Fig. 5; Col. 11, Lines 42 to 46) and means for awarding a payoff based on an outcome of the gaming activity (3, Fig. 3; Col. 10, Line 67 to Col. 11, Line 1). Physics, however, teaches physical object data (Ch. 2, among others, Kinematics, Pages 27 to 56, velocity, acceleration, etc.; Ch. 4, Kinetics, mass, force, etc., Pages 69 to 86) and simulation rule data (Ch. 5, Collisions, how bodies interact with each other, Pages 87 to 100), and processing the physical object data and simulation rule data to produce a realistic depiction of gaming activity on the display (Ch. 16, Multiple Bodies in 3D, Pages 249 to 267; especially Fig. 16-1, Page 250, Impact Simulation). It would be obvious to one of ordinary skill in the art to apply the physical object data, simulation rule data, and processing of physical object data and simulation rule data of Physics to the gaming system of '895. One of the cited possible manual dexterity games of '895 is a driving simulation game in which the player must avoid an obstacle (Col. 5, Lines 18 to 22). Fig. 16-1 of Physics show a driving simulation game in which a car hits an obstacle and the resulting collision is shown. The combination would yield a system memory containing physical object data and simulation rule data and a central processor for processing the physical object data and the simulation rule data to produce a realistic depiction of gaming activity on the display.

The advantage of this combination would be to use physical laws to realistically depict the objects on the screen and their interactions. Power Drive, however, teaches simulation rule data including performance tendencies of the physical object. Page 8 outlines how the engine, suspension, tires, brakes, and lights can sustain damage throughout the course of the race, affecting the car's performance. The examiner notes that the performance tendencies claimed by the applicants do not necessarily affect the game objects' interactions with each other. It would be obvious to one of ordinary skill in the art to apply the performance tendencies of Power Drive to the combination of '895 and Physics. A damaged engine would cause a car to not accelerate as fast; poor brakes would cause a car to decelerate slowly or not at all—these could be simulated by the physics rules outlined in Ch. 4, Kinematics, of Physics. Body damage caused by collisions could be simulated by the physics rules in Ch. 5, Collisions, of Physics. This is also suggested by '895, which mentions a driving simulation game in which a player must avoid obstacles (Col. 5, Lines 18 to 22). This combination would yield a system memory containing physical object data and simulation rule data, wherein the simulation rule data includes performance tendencies of the physical object. The advantage of this combination would be to realistically simulate the various types of damage that might occur in a racing game.

31. As to Claim 8: '895 teaches a method of operating a gaming machine (Abst.). '895 teaches accepting a wager (coin acceptor 106, bill validator 108, and card reader 112, Fig. 1A). Physics teaches accessing physical object data and simulation rule data (Ch. 2, among others, Kinematics, Pages 27 to 56, velocity, acceleration, etc., Ch. 4,

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Kinetics, mass, force, etc., Pages 69 to 86; Ch. 5, Collisions, how bodies interact with each other, Pages 87 to 100). Physics teaches mathematically modeling game actions of one or more physical objects within a simulation world using the physical object data and the simulation rule data (Ch. 5, Collisions, how bodies interact with each other, Pages 87 to 100; Ch. 16, Multiple Bodies in 3D, Pages 249 to 267, especially Fig. 16-1, Page 250, Impact Simulation). Power Drive teaches simulation rule data including performance tendencies of a physical object, namely a car in a racing game (Page 8 outlines how the engine, suspension, tires, brakes, and lights can sustain damage throughout the course of the race, affecting the car's performance). '895 displays a visual depiction of the game interactions (Fig. 1A, Col. 5, Lines 18 to 22). '895 determines if the game actions meet winning conditions and awards a payoff if the game actions meet winning conditions (3, Fig. 3; Col. 10, Line 67 to Col. 11, Line 1).

32. As to Claim 15: '895 teaches a method of operating a gaming machine (Abst.), including accepting a wager (coin acceptor 106, bill validator 108, and card reader 112, Fig. 1A). '895 simultaneously simulates and displays in real time an interaction of simulated physical objects (Col. 5, Lines 1 to 21, real-time display inherently necessary in game of manual dexterity to avoid lags between input and display). Physics teaches the display of interactions of physical objects in three dimensions (Ch. 16, Multiple Bodies in 3D, Pages 249 to 267; especially Fig. 16-1, Page 250, Impact Simulation). '895 determines an outcome of the interaction and awards a payoff if the outcome meets winning criteria (3, Fig. 3; Col. 10, Line 67 to Col. 11, Line 1).

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33. As to Claim 22: '895 teaches a method of operating a gaming machine (Abst.) comprising accepting a wager (coin acceptor 106, bill validator 108, and card reader 112, Fig. 1A). Physics teaches a physics engine (Page xi, Preface). Physics teaches using physical object data and simulation rule data to numerically simulate an interaction of physical objects, thereby causing simulated interaction (Ch. 16, Multiple Bodies in 3D, Pages 249 to 267; especially Fig. 16-1, Page 250, Impact Simulation). Power Drive teaches the interaction of physical objects including performance tendencies (driver must avoid colliding with snow banks and obstacles, Pages 6 and 7; damage resulting from collisions, Page 8, statement "...the only thing tougher than a rally car is a rally track..." implying collisions with track obstacles). Physics teaches rendering a visual display of the simulated interaction using a two-dimensional representation of three-dimensional forms (Ch. 5, Collisions, how bodies interact with each other, Pages 87 to 100; Ch. 16, Multiple Bodies in 3D, Pages 249 to 267, especially Fig. 16-1, Page 250, Impact Simulation). '895 determines an outcome of the interaction and awards a payoff if the outcome meets winning criteria (3, Fig. 3; Col. 10, Line 67 to Col. 11, Line 1).

34. As to Claim 24: It is possible for the performance tendencies of Power Drive to remain constant over time if the player avoids reckless driving (Page 8).

35. As to Claim 25: It is possible for the performance tendencies of Power Drive to change over time if the player accumulates damage over the course of the game (Page 8).

36. As to Claim 26: The performance tendencies of Power Drive can affect the outcome of the gaming activity (car's condition affecting performance, Page 8).

37. As to Claim 27: Power Drive modifies the performance tendencies of the physical object based on the game actions (reckless driving resulting in accumulated damage affecting car's performance, Page 8).

38. As to Claim 28: The performance tendencies of Power Drive can affect whether game actions meet winning conditions (reckless driving resulting in accumulated damage affecting car's performance, Page 8).

39. As to Claim 29: The performance tendencies of Power Drive affect the outcome of the interaction (reckless driving resulting in accumulated damage affecting car's performance, Page 8).

Claim Rejections - 35 USC § 112

40. The following is a quotation of the first paragraph of 35 U.S.C. 112:

41. The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

42. Claims 1 to 29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The examiner could find no enablement in the specification for the performance tendencies cited in Claims 1, 8, 15, and 22, the performance tendency

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remaining constant over time of Claim 24, the performance tendency changing over time of Claim 25, the performance tendency affecting the outcome of game activity of Claim 26, the performance tendency being based on game actions of Claim 27, the performance tendency affecting winning conditions of Claim 28, or the performance tendency affecting the outcome of Claim 29.

Citation of Pertinent Prior Art

43. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The manual for Top Gear Rally 2, downloaded from www.replacementdocs.com, Oct. 26th, 2006 is considered to be relevant as it discloses performance tendencies in the form of vehicle damage accumulated during the course of a racing game. Japanese patent publication JP 11-114225 A is considered to be relevant as it discloses a racing game with physical object data and physical rule data. EPO patent publication EP 1 029 569 A2, application 00301148.3, is considered to be relevant as it discloses a racing game with performance tendencies in the form of acceleration and braking characteristics.

Conclusion


44. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Hoel whose telephone number is (571) 272-5961. The examiner can normally be reached on Mon. to Fri., 8:00 A.M. to 4:30 P.M.

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45. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan M. Thai can be reached on (571) 272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

46. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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